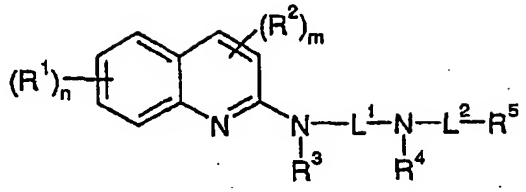
Claims

1. A compound of formula (I)



I

wherein

R^1 represents a C_{1-4}alkoxy group optionally substituted by one or more fluoro or a C_{1-4}alkyl group optionally substituted by one or more fluoro;

n represents 0 or 1;

R^2 represents a C_{1-4}alkyl group optionally substituted by one or more fluoro or a C_{1-4}alkoxy group optionally substituted by one or more fluoro ;

m represents 0 or 1;

R^3 represents H or a C_{1-4}alkyl group;

L^1 represents an alkylene chain $(CH_2)_r$ in which r represents 2 or 3 or L^1 represents a cyclohexyl group wherein the two nitrogens bearing R^3 and R^4, respectively, are linked to the cyclohexyl group either via the 1,3 or the 1,4 positions of the cyclohexyl group or L^1 represents a cyclopentyl group wherein the two nitrogens bearing R^3 and R^4, respectively, are linked to the cyclopentyl group via the 1,3 position of the cyclopentyl group and additionally when R^5 represents 9, 10-methanoanthracen-9(10*H*)-yl the group $-L^1-N(R^4)-$ together represents a piperidyl ring which is linked to L^2 through the piperidinyl nitrogen and to N-R^3 via the 4 position of the piperidyl ring with the proviso that when R^5 represents 9, 10-methanoanthracen-9(10*H*)-yl then r is only 2;

R^4 represents H or a C_{1-4}alkyl group optionally substituted by one or more of the following: an aryl group or a heteroaryl group;

L^2 represents a bond or an alkylene chain $(CH_2)_s$ in which s represents 1, 2 or 3 wherein the alkylene chain is optionally substituted by one or more of the following: a C_{1-4}alkyl group, phenyl or heteroaryl;

R^5 represents aryl, a heterocyclic group or a C_{3-8}cycloalkyl group which is optionally fused to a phenyl or to a heteroaryl group;

as well as optical isomers and racemates thereof as well as pharmaceutically acceptable salts, thereof;

with a first proviso that when n is 0, and m is 1 and R^2 is methyl located at the 4-position of the quinoline ring, and R^3 is H and R^4 is H and L^1 is $(CH_2)_2$ or $(CH_2)_3$ or 1,4-cyclohexyl, and L^2 is a bond then R^5 is not 4-methylquinolin-2-yl;

and with a second proviso that when n is 0, and m is 0 or 1 and R^2 is a C_{1-3}alkoxy group located at the 4-position of the quinoline ring, and R^3 is H or a C_{1-3}alkyl group and R^4 is H or a C_{1-3}alkyl group and L^1 is $(CH_2)_3$ and L^2 is methylene optionally substituted by one or more C_{1-3}alkyl groups or phenyl then R^5 is not phenyl, thienyl or indolyl optionally substituted by one, two or three C_{1-4}alkyl groups or halo.

2. A compound as claimed in claim1 in which R^1 represents a C_{1-4}alkoxy group.

3. A compound as claimed in claim1 or claim 2 in which R^2 represents a C_{1-4}alkyl group.

4. A compound as claimed in any previous claim in which L^1 represents trimethylene, 1,3-cyclohexyl or 1,4-cyclohexyl or when R^5 represents 9, 10-methanoanthracen-9(10*H*)-yl L^1 additionally represents ethylene.

5. A compound as claimed in any previous claim in which L^1 represents trimethylene.

6. A compound as claimed in any previous claim in which L^1 represents 1,3-cyclohexyl.

7. A compound as claimed in any previous claim in which L^1 represents 1,4-cyclohexyl.

8. A compound as claimed in any previous claim in which L^1 represents 1,3-cyclopentyl.

9. A compound as claimed in any previous claim in which R^3 represents H.

10. A compound as claimed in any previous claim in which L^2 represents methylene.

11. A compound as claimed in any previous claim in which R^4 represents H.

12. A compound as claimed in any previous claim in which R^5 represents phenyl, 2-naphthyl or 9, 10-methanoanthracen-9(10*H*)-yl, each of which is optionally substituted by one or more of the following: methyl, chloro, dimethylamino or phenyl.

13. A compound as claimed in any previous claim in which R^5 represents 4, 5, 6, 7-tetrahydrothianaphth-4-yl , benzo[*b*]thien-3-yl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, benzofuranyl, pyridyl, 1*H*-pyrrol-2-yl, 1*H*-indol-3-yl, or 2-quinolinyl, each of which is optionally substituted by one or more of the following: nitro, methyl, acetyl or chloro.

14. A compound selected from:

N-(9, 10-methanoanthracen-9(10*H*)-ylmethyl)-*N'*-(2-quinolinyl)-1, 2-ethanediamine;

N-(6-methoxy-4-methyl-2-quinolinyl)-*N'*-(3-thienylmethyl)-1, 3-propanediamine;

N-(9, 10-methanoanthracen-9(10*H*)-ylmethyl)-*N'*-(2-quinolinyl)-1, 3-propanediamine;
N-(2-quinolinyl)-*N'*-(3-thienylmethyl)-1, 3-propanediamine;
N-(9, 10-methanoanthracen-9(10*H*)-ylmethyl)-*N'*-(2-quinolinyl)-1, 4-cyclohexanediamine;
N-[(1-acetyl-1*H*-indol-3-yl)methyl]-*N'*-(6-methoxy-4-methyl-2-quinolinyl)-1, 3-propanediamine;
N-(9, 10-methanoanthracen-9(10*H*)-ylmethyl)- *N'*-(2-quinolinyl)-1, 3-cyclohexanediamine;
N-(2-quinolinyl)-*N'*-[1-(3-thienyl)ethyl]-1, 3-propanediamine;
N-(2-quinolinyl)-*N'*-(3-thienylmethyl)-1, 3-cyclohexanediamine;
N-(9,10-methanoanthracen-9(10*H*)-ylmethyl)-*N'*-(6-methoxy-4-methyl-2-quinolinyl)-1, 3-propanediamine;
N-(2-quinolinyl)-*N'*-(4, 5, 6, 7-tetrahydrothianaphth-4-yl)-1, 3-propanediamine;
N-methyl-*N'*-(2-quinolinyl)-*N*-(3-thienylmethyl)-1, 3-propanediamine;
N-(2-quinolinyl)-*N'*, *N'*-bis(3-thienylmethyl)-1, 3-propanediamine;
N- (9, 10-methanoanthracen-9(10*H*)-ylmethyl)-*N*-methyl-*N'*-(2-quinolinyl)-1, 3-propanediamine;
N-(2-quinolinyl)-*N'*-[(2, 4, 6-trimethylphenyl)methyl]-1, 3-propanediamine;
N-(2-phenylethyl)-*N'*-(2-quinolinyl)-1, 3-propanediamine;
N-(1-benzo[*b*]thien-3-ylethyl)-*N'*-(2-quinolinyl)-1, 3-propanediamine;
N-[(3, 4-dichlorophenyl)methyl]-*N'*-(2-quinolinyl)-1, 3-cyclohexanediamine;
N-(9, 10-methanoanthracen-9(10*H*)-ylmethyl)-*N'*-methyl-*N'*-(2-quinolinyl)-1, 3-propanediamine;
N-(2-quinolinyl)-*N'*-(2-thienylmethyl)-1, 3-propanediamine;
N-(3-furanylmethyl)-*N'*-(2-quinolinyl)-1, 3-propanediamine;
N-[(3, 4-dichlorophenyl)methyl]-*N*-methyl-*N'*-(2-quinolinyl)-1, 3-propanediamine;
N-[1-(9, 10-methanoanthracen-9(10*H*)-ylmethyl)-4-piperidinyl]-2-quinolinamine;
N-(1*H*-indol-3-ylmethyl)-*N'*-(2-quinolinyl)-1, 3-propanediamine;
N-(2-naphthalenylmethyl)-*N'*-(2-quinolinyl)-1, 3-propanediamine;
N-(2, 2-diphenylethyl)-*N'*-(2-quinolinyl)-1, 3-propanediamine;
N-(1*H*-indol-3-ylmethyl)-*N'*-(6-methoxy-4-methyl-2-quinolinyl)-1, 3-propanediamine;
N-[(3, 4-dichlorophenyl)methyl-*N'*-(2-quinolinyl)-1, 3-propanediamine;
N-[(3, 4-dichlorophenyl)methyl]-*N'*-(2-quinolinyl)-1, 4-cyclohexanediamine;

N, *N'*-di-(2-quinolinyl)-1 ,3-propanediamine;

N-(2-quinolinyl)-*N'*-(2-quinolinylmethyl)-1, 3-propanediamine;

N-[(1-acetyl-1*H*-indol-3-yl)methyl]-*N'*-(2-quinolinyl)-1, 3-propanediamine;

N-(cyclopropylmethyl)-*N'*-(2-quinolinyl)-1, 3-propanediamine;

N-(2-quinolinyl)-*N'*-(3-thienylmethyl)-1, 4-cyclohexanediamine;

N-([1, 1'-biphenyl]-4-ylmethyl)-*N'*-(2-quinolinyl)-1, 3-propanediamine;

N-(6-methoxy-4-methyl-2-quinolinyl)-*N'*-[3-(5-methyl-2-furanyl)butyl]-1, 3-propanediamine;

N-[[4-(dimethylamino)phenyl]methyl]-*N'*-(2-quinolinyl)-1, 3-propanediamine;

N-(1*H*-pyrrol-2-ylmethyl)-*N'*-(2-quinolinyl)-1, 3-propanediamine;

N-[3-(5-methyl-2-furanyl)butyl]-*N'*-(2-quinolinyl)-1, 3-propanediamine;

N-[(5-nitro-3-thienyl)methyl]-*N'*-(2-quinolinyl)-1, 3-propanediamine;

N-(6-methoxy-4-methyl-2-quinolinyl)-*N'*-[(5-nitro-3-thienyl)methyl]-1, 3-propanediamine;

N-(6-methoxy-4-methyl-2-quinolinyl)-*N'*-(1*H*-pyrrol-2-ylmethyl)-1, 3-propanediamine;

N-[(3,4-dichlorophenyl)methyl]-*N'*-methyl-*N'*-2-quinolinyl)-1, 3-propanediamine;

N-[1-(2,5-dimethyl-3-thienyl)ethyl]-*N'*-(2-quinolinyl)-1,3-propanediamine;

N-[1-(2,5-Dichloro-thiophen-3-yl)-ethyl]-*N'*-(2-quinolinyl)-1,3-propanediamine;

N-[(1-acetyl-1*H*-indol-3-yl)methyl]-*N'*-quinolin-2-ylcyclohexane-1,3-diamine;

N-(6-methoxy-4-methylquinolin-2-yl)-*N'*-(3-thienylmethyl)cyclopentane-1,3-diamine;*N*-(6-methoxy-4-methylquinolin-2-yl)-*N'*-[(1-methyl-1*H*-indol-3-yl)methyl]cyclopentane-1,3-diamine;

(1*S*,3*S*)-*N*-(6-methoxy-4-methylquinolin-2-yl)-*N'*-[(1-methyl-1*H*-indol-3-yl)methyl]cyclopentane-1,3-diamine

(1*S*,3*S*)-*N*-(6-methoxy-4-methylquinolin-2-yl)-*N'*-(3-thienylmethyl)cyclopentane-1,3-diamine

N-[(1-acetyl-1*H*-indol-3-yl)methyl]-*N'*-(6-methoxy-4-methylquinolin-2-yl)cyclohexane-1,3-diamine;

N-(1*H*-indol-3-ylmethyl)-*N'*-(6-methoxy-4-methylquinolin-2-yl)cyclohexane-1,3-diamine;

N-(6-methoxy-4-methylquinolin-2-yl)-*N'*-(3-thienylmethyl)cyclohexane-1,3-diamine;

N-(6-methoxy-4-methylquinolin-2-yl)-*N'*-[(1-methyl-1*H*-indol-3-yl)methyl]cyclohexane-1,3-diamine;

N-(1-benzofuran-2-ylmethyl)-*N'*-(6-methoxy-4-methylquinolin-2-yl)cyclohexane-1,3-diamine; *N*-(6-methoxy-4-methylquinolin-2-yl)-*N'*-(pyridin-2-ylmethyl)cyclohexane-1,3-diamine and

N-(4-methylquinolin-2-yl)-*N'*-(3-thienylmethyl)cyclohexane-1,3-diamine;

as well as pharmaceutically acceptable salts thereof.

15. A compound of formula I as claimed in any previous claim for use as a medicament.

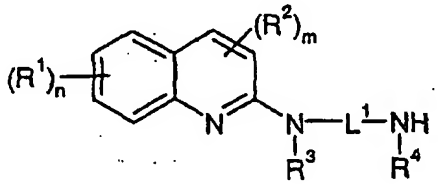
16. A pharmaceutical formulation comprising a compound of formula I, as defined in any one of claims 1 to 14 and a pharmaceutically acceptable adjuvant, diluent or carrier.

17. Use of a compound of formula I, as defined in any one of claims 1 to 14 in the preparation of a medicament for the treatment or prophylaxis of conditions associated with obesity.

18. A method of treating obesity, psychiatric disorders, anxiety, anxio-depressive disorders, depression, bipolar disorder, ADHD, cognitive disorders, memory disorders, schizophrenia, epilepsy, and related conditions, and neurological disorders and pain related disorders , comprising administering a pharmacologically effective amount of a compound as claimed in any one of claims 1 to 14 to a patient in need thereof.

19. A compound as defined in any one of claims 1 to 14 for use in the treatment of obesity.

20. A process for the preparation of compounds of formula I comprising reacting a compound of formula II



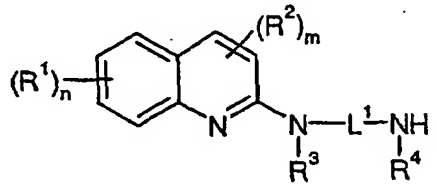
II

in which R^1, R^2, R^3, R^4, L^1, n and m are as previously defined with a compound of formula III

III

in which R^5 is as previously defined and $L^{2'}$ represents a group which after reaction of compounds II and III gives L^2 on reduction, under reductive alkylation conditions.

21. Intermediates of formula II



II

in which R^1, R^2, R^3, R^4, L^1, n and m are as defined in claim 1.